

REMARKS

Claims 1-11 are pending in this application. In the Office Action, the specification and claims are objected to; claims 2 and 3 are rejected under 35 U.S.C. §112; and claims 1-10 are rejected under 35 U.S.C. §103. By this amendment, the specification is amended, and claims 1 and 2 are amended. Support for the amendment can be found in the disclosure in, for example, paragraphs [0014] and [0016]. No new matter is added. Reconsideration of the application based upon the above amendments and the following remarks is respectfully requested.

Applicants thank the Examiner for the indication that claim 11 as objected to as being dependent on a rejected base claim but is otherwise allowable.

I. Objection to Specification and Claims

Applicants have amended the specification and Abstract to conform to the formalities noted in the Office Action. Accordingly, Applicants respectfully request withdrawal of the objections.

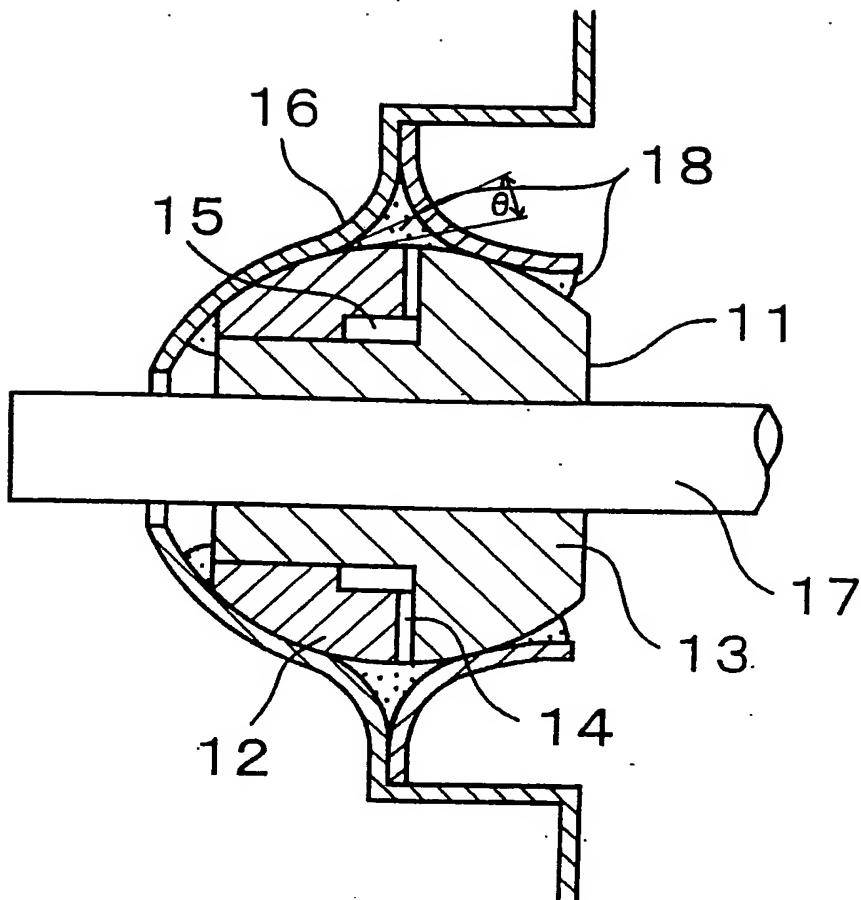
II. Rejection Under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 2 and 3 under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

Claim 2 has been amended to delete the objectionable recitation.

Regarding claim 3, the Office Action states that "the limitation defining an angle between the spherical surface and the inside surface of the housing as 45 degree, or less, is not fully understood." In this respect, Applicants provide below a modified version of Fig. 3, which shows the angle θ between the spherical surface and the inside surface of the housing. As shown in the below drawing, the angle is defined by the spherical surface of the bearing 11 and the inside surface of the housing 16.

Fig. 3



Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over Chen (U.S. Patent No. 6,547,439). Applicants respectfully traverse the rejection.

Chen does not disclose at least the limitations of "a gap continuously extending from an end portion of the cavity along the axis and having a width narrower than that of the cavity," and "wherein the gap has an opening at an end surface of the bearing or a peripheral surface of the bearing, and is used for a guide passage through which a lubricating oil

discharged from the bearing is supplied to a predetermined place when the lubricating oil is discharged to the surface of the bearing by temperature rise of the lubricating oil due to the rotation of a shaft supported by the bearing," as recited in amended claim 1.

As shown in Chen's Figs. 2 and 3, Chen discloses that the second ring 12 is placed in the shaft hole 111 of the first ring 11, thereby the slot hole 112 forms a close oil storage space 10 (col. 2, lines 27-38). In Chen, the first ring 11 may have a cavity 113, through which the lubricating oil can be filled into the close oil storage space 10. However, Chen does not disclose "a gap continuously extending from an end portion of the cavity along the axis." Even assuming that the close oil storage 10 corresponds to the "cavity" in claim 1 and the cavity 113 corresponds to the "gap" in claim 1, the cavity 113 does not continuously extend from an end portion of the close oil storage space 10. Therefore, Chen does not disclose at least the limitations of "a gap continuously extending from an end portion of the cavity along the axis and having a width narrower than that of the cavity."

Because Chen does not disclose "a gap continuously extending from an end portion of the cavity along the axis and having a width narrower than that of the cavity," Chen cannot disclose the element "wherein the gap has an opening at an end surface of the bearing or a peripheral surface of the bearing, and is used for a guide passage through which a lubricating oil discharged from the bearing is supplied to a predetermined place when the lubricating oil is discharged to the surface of the bearing by temperature rise of the lubricating oil due to the rotation of a shaft supported by the bearing," as recited in claim 1.

Moreover, Chen discloses that "the lubricating oil stored in the oil storage space 10 will leak outward through the capillary pores of the second ring 12 due to rotation of the rotation shaft of the rotor, so that the wall face of the shaft hole 121 of the second ring 12 forms a lubricating oil film layer, such that the optimal lubricating effect is formed between the rotation shaft of the rotor and the bearing device 1. The lubricating oil gradually leaks

outward through the capillary pores of the second ring 12, so that the release velocity of the lubricating oil is very slow, thereby increasing the lifetime of the bearing device" (col. 2, line 66 to col. 3, line 9). This description clearly shows that the cavity 113 of Chen cannot function as a guide passage for the lubricating oil. In Chen, the cavity 113 is merely an oil supplying opening, and is "closed by a seal member 114, so that the lubricating oil can be stored without leakage" (col. 2, lines 48-55).

Because Chen does not disclose at least the limitations of "a gap continuously extending from an end portion of the cavity along the axis and having a width narrower than that of the cavity," and "wherein the gap has an opening at an end surface of the bearing or a peripheral surface of the bearing, and is used for a guide passage through which a lubricating oil discharged from the bearing is supplied to a predetermined place when the lubricating oil is discharged to the surface of the bearing by temperature rise of the lubricating oil due to the rotation of a shaft supported by the bearing," there is no showing of a reason or rationale why a person of ordinary skill in the art would have made the present invention based on the teaching of Chen with any reasonable expectation of success.

For the foregoing reasons, claim 1 is allowable over Chen. Claims 2-10 directly or indirectly depend from claim 1. Therefore, dependent claims 2-10 are allowable by virtue of their dependence from allowable claim 1.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of this application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



William P. Berridge
Registration No. 30,024

Aya Suzuki
Registration No. 64,621

WPB:AQS/mab

Attachment:

Amended Abstract

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OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

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